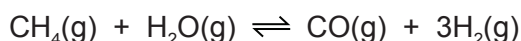


CHEMICAL ENERGETICS

- 4 Hydrogen can be manufactured from methane by steam reforming. **0620/42/M/J/16-Q4**



The reaction is carried out using a nickel catalyst at temperatures between 700 °C and 1100 °C and using a pressure of one atmosphere.

The forward reaction is endothermic.

- (a) What is meant by the term *catalyst*?

.....
..... [2]

- (b) Suggest **two** reasons why a temperature lower than 700 °C is not used.

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.....
..... [2]

- (c) Suggest **one** advantage of using a pressure greater than one atmosphere.

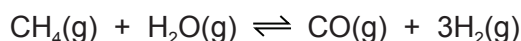
..... [1]

- (d) Suggest **one** disadvantage of using a pressure greater than one atmosphere.

..... [1]

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